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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,565	04/09/2004	Baoquan Zhang	2637	1278

28005 7590 09/24/2008

SPRINT
6391 SPRINT PARKWAY
KSOPHT0101-Z2100
OVERLAND PARK, KS 66251-2100

EXAMINER	
NGUYEN, KHAI N	

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
09/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,565	ZHANG ET AL.	
	Examiner	Art Unit	
	KHAI N. NGUYEN	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action on February 1, 2008 is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 101

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Method claims (1-20) according to the specification "may be implemented in a form of software" (see instant application's specification - **page 10 lines 19-21**). Therefore, these method claims are interpreted as software claims which are non-statutory. Software, or logic, or any type of "functional descriptive material", is not statutory when claimed as descriptive material, per se. See pages 50-57 of "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-2, 4-8, 11-15, and 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taff et al. (U.S. Patent Number 6,845,152 hereinafter "Taff") in view of McConnell et al. (U.S. Patent Number 6,373,930 hereinafter "McConnell").

Regarding claim 1, Taff teaches a method to stop the call looping in a communications network (Figs. 1-2, column 1, lines 6-8), this method for setting up a call to a subscriber station (Figs. 1-2, 34 Mobile Phone, 38, 39 Telephones) comprising:

receiving a first request to set up a call from a calling number to a called number of a subscriber station, the first request carrying the calling number and the called number (Figs. 1-2, 34, 38, 39, column 1, lines 1-6);

processing the first request at a service node (Figs. 1-2, 14 SERVER with 18 CALL CONTROL FUNCTION, column 2, lines 43-54, i.e., read server 14 as a service node) and providing, from the service node, a second request to set up the call to the called number of the subscriber station, the second request including the calling number, the called number, and a non-loop parameter to indicate that call setup signaling has already occurred to the service node and thus to help avoid endless looping of call setup signaling to the service node (Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., "call parameter data received with the coming call message" and "the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter);

receiving the second request at a switch (Figs. 1-2, 12 SWITCH, 18), and directing the switch to set up the call to the subscriber station (Figs. 1-2, column 3, lines 9-10).

However, Taff does not specifically disclose sending a service request to a service control point (SCP). Taff teaches the PSTN with Centrex Switch, the Public Land Mobile Network (PLMN), and the IP network (Fig. 1, 24, 28, 30, column 2, lines 7-42). It is old and well known in the art that the PSTN usually includes the advanced intelligent network (AIN) that uses system signaling 7 (CCS7/SS7) with the components such as the SCP, and signal transfer point (STP).

In the same field of endeavor, McConnell teaches the system and the methods to send a service request including various parameters to a SCP, and in response the SCP directs the switch to set up the call (McConnell – Figs. 1-10, column 2, lines 25-65). The advantage of McConnell is the system and methods can be useful for both landline and wireless networks (McConnell – column 1, lines 11-15).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., to send a request with a non-loop parameter to the SCP) ready for improvement to yield predictable results (see KSR – MPEP 2143). Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of the SCP, as taught by

McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claims 2, 4, 15 and 17, Taff does not specifically disclose to apply pre-paid call processing logic and the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM). Although Taff teaches a non-loop parameter (see Taff - Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., “call parameter data received with the coming call message” and “the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter).

However, McConnell teaches the method wherein processing the first request or applying the service logic in the SN (McConnell - Fig. 4, 120) comprises applying pre-paid call processing logic (McConnell - Fig. 4, col. 11 lines 12-21), and wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM) (McConnell - Fig. 9 (part B), 280, col. 19 lines 42-43), and wherein the parameter comprises predefined digits included in a ReDirectingNumber parameter of the ISUP IAM (McConnell - col. 3 lines 12-22, and col. 22 lines 7-17, i.e., IS-41 RedirectionDirective operation, it is old and well known in the art that the RedirectionDirective operation contains ReDirectingNumber parameter)).

Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of the pre-paid processing logic and the ISUP IAM message, as

taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claims 5-8, and 18, Taff does not specifically disclose the ISUP IAM is mapped to a SS7 message, the non-loop parameter is mapped to a WIN parameter, and the non-loop parameter comprises predefined digits. Although Taff teaches a non-loop parameter (see Taff - Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., “call parameter data received with the coming call message” and “the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter).

McConnell teaches the method wherein the ISUP IAM is mapped to a Signaling System 7 (SS7) message in accordance with the Wireless Intelligent Network (WIN) IS-771 standard, and wherein the non-loop parameter is mapped to a WIN parameter in the SS7 message (McConnell - Figs. 1-4, col. 4 lines 17-37, i.e., Interim Standard IS-771), and wherein the second request comprises an Integrated Services Digital Network User Part (ISUP) Initial Address Message (IAM) (McConnell - Fig. 9 (part B), 280, col. 19 lines 42-43), and wherein the non-loop parameter comprises predefined digits included in an Original Called Party Number parameter of the ISUP IAM (McConnell - col. 3 lines 12-28, i.e., IAM message provide address information “such as the dialed number” – it is old and well known in the art that Dialed Number or Called Party Number is the same).

Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of mapping to a SS7 message, to a WIN parameter and including the predefined digits, as taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claims 11-12, Taff teaches the method wherein receiving the first request at the switch (Figs. 1-2, 12 SWITCH) comprises receiving the first request at a mobile switching center (Figs. 1-2, 30 Public Land Mobile Network, 32 Cell Site, 34 Mobile Telephone), and wherein receiving the first request at the switch comprises receiving the first request at a public switched telephone network switch (Figs. 1-2, 28 Centrex Switch in the PSTN, 40 PSTN) (Figs. 1-2, column 2, lines 55-67).

Regarding claims 13, and 19-20, Taff does not specifically disclose to generate AIN trigger, WIN trigger, and generating a query for seeking call processing guidance from the service control. Again, McConnell teaches the method further comprising generating one of an Advanced Intelligent Network (AIN) trigger (Fig. 1, "AIN", col. 2 lines 25-30, and lines 44-52, i.e., AIN trigger points) and a Wireless Intelligent Network (WIN) trigger (Fig. 1, col. 7 lines 30-55, i.e., WIN triggers to facilitate prepaid service) in response to receiving the first request and, as a result, generating a query for seeking call processing guidance from the service control point (Fig. 1, col. 7 lines 60-67, and col. 8 lines 1-12, i.e., SCP provides call processing guidance).

Therefore, it would have been obvious to a person of ordinary in the art to incorporate the AIN and WIN triggers to seek guidance from the SCP, as taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claim 14, Taff teaches a method to stop the call looping in a communications network (Figs. 1-2, column 1, lines 6-8), this method for setting up a call to a subscriber station (Figs. 1-2, 34 Mobile Phone, 38, 39 Telephones) comprising:

at a telecommunications switch (Figs. 1-2, 12 SWITCH), receiving a first request to set up the call from a calling number (Figs. 1-2, 34, 38, 39) to a called number (Figs. 1-2, 34, 38, 39) of the subscriber station (Figs. 1-2, column 1, lines 1-6);

at the service node (Figs. 1-2, 14 SERVER with 18 CALL CONTROL FUNCTION, column 2, lines 43-54, i.e., server 14 read as a service node), applying service logic and providing, to the switch, (Figs. 1-2, 12) a second request to set up the call to the subscriber station, wherein the second request comprises the calling number, the called number, and a non-loop parameter to indicate that call setup signaling has already occurred to the service node (Figs. 1-2, 14) and thus to help avoid endless looping of call setup signaling to the service node (Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., “call parameter data received with the coming call message” and “the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter);

receiving the second request at the switch (Figs. 1-2, 12 SWITCH, 18) (Figs. 1-2, column 3, lines 9-10);

However, Taff does not specifically disclose to send a first query seeking call processing guidance to a SCP, receiving from a SCP a response to direct the switch to set up the call to a service node, and a second query to a SCP including the non-loop parameter. Although Taff teaches a non-loop parameter (see Taff - Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., “call parameter data received with the coming call message” and “the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter), and Taff teaches the PSTN with Centrex Switch, the Public Land Mobile Network (PLMN), and the IP network (Fig. 1, 24, 28, 30, column 2, lines 7-42). It is old and well known in the art that the present PSTN usually includes the advanced intelligent network (AIN) that uses system signaling 7 (CCS7/SS7) with the components such as the SCP, and signal transfer point (STP).

In the same field of endeavor, McConnell teaches the system and the methods to response to the first request, sending, from the switch (McConnell - Fig. 4, 110) to the SCP (McConnell - Fig. 4, 124 SCP), a first query seeking call processing guidance (McConnell - col. 8 lines 62-65), at the switch, receiving, from the SCP, a response to the first query directing the switch to set up the call to a service node (McConnell - Fig. 4, 120, service node or “IP”, col.11 lines 12-15, i.e., service node “SN”, and col. 9 lines

1-10), responsive to the second request, sending, from the switch to the SCP, a second query seeking call processing guidance, the second query including the non-loop parameter (McConnell - column 9, lines 1-22), and detecting the non-loop parameter in the second query at the SCP, and responsively sending, from the SCP to the switch, a directive to set up the call to the subscriber station rather than to the service node and receiving the directive at the switch and responsively setting up the call to the subscriber station (McConnell - Fig. 4, 102, column 9, lines 47-50). The advantage of McConnell is the system and methods can be useful for both landline and wireless networks (McConnell – column 1, lines 11-15).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., to send a first query seeking call processing guidance to a SCP, receiving from a SCP a response to direct the switch to set up the call to a service node, and a second query to a SCP including the non-loop parameter) ready for improvement to yield predictable results (see KSR – MPEP 2143). Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of the SCP, as taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claim 21, Taff teaches a method to stop the call looping in a communications network (Figs. 1-2, column 1, lines 6-8), this method for setting up a call to a subscriber station (Figs. 1-2, 34 Mobile Phone, 38, 39 Telephones) comprising:

a switch (Figs. 1-2, 12 SWITCH) for receiving a first request to set up the telephone call from a calling number (Figs. 1-2, 34, 38, 39) to a called number (Figs. 1-2, 34, 38, 39) of a subscriber station (Figs. 1-2, column 1, lines 1-6);

a service node (Figs. 1-2, 14 SERVER with 18 CALL CONTROL FUNCTION, column 2, lines 43-54, i.e., server 14 read as a service node) coupled with the switch (Figs. 1-2, 12) for providing one or more telecommunication services to the subscriber station, the service node comprising service logic (Figs. 1-2, 18 CALL CONTROL FUNCTION) for generating and sending a second request to the switch to set up the call to the subscriber station, the service logic including instructions for including in the second request (i) the calling number, (ii) the called number, and (iii) a non-loop parameter to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the service node (Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., “call parameter data received with the coming call message” and “the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter)”),

However, Taff does not specifically disclose a SCP, receiving from a SCP coupled with the switch, the SCP comprising service logic for providing call processing

guidance, and the SCP's service logic comprises instructions to recognize the non-loop parameter and to set up the call to the subscriber. Although Taff teaches a non-loop parameter (see Taff - Figs. 1-2, 18 CALL CONTROL FUNCTION, column 4, lines 17-21, and lines 34-38, i.e., "call parameter data received with the coming call message" and "the optional parameter which used to identify the call as a possible looped call" read as a non-loop parameter), and Taff teaches the PSTN with Centrex Switch, the Public Land Mobile Network (PLMN), and the IP network (Fig. 1, 24, 28, 30, column 2, lines 7-42). It is old and well known in the art that the present PSTN usually includes the advanced intelligent network (AIN) that uses system signaling 7 (CCS7/SS7) with the components such as the SCP, and signal transfer point (STP).

In the same field of endeavor, McConnell teaches the system and the methods with a SCP (McConnell - Fig. 4, 124 SCP) coupled with the switch (McConnell - Fig.4, 110), the SCP comprising service logic (McConnell - Fig. 5, 124, 230 BASE SERVICE LOGIC) for providing call processing guidance to the switch (McConnell - Fig. 6, 110, 202 MSC Switching Logic, i.e., guidance via STP 116, col. 8 lines 64-67, and col. 9 lines 1-5), and wherein the service logic of the SCP (McConnell - Fig. 5, 124, 230) comprises instructions for recognizing the non-loop parameter in the second request and further instructions for responsively providing guidance to the switch to set up the call to the subscriber station rather than again to the service node (McConnell - Fig.4, col. 9 lines 47-50). The advantage of McConnell is the system and methods can be useful for both landline and wireless networks (McConnell – column 1, lines 11-15).

It would have been obvious to a person of ordinary in the art at the time of the invention was made to apply a known technique to a known device (i.e., to have a SCP coupled with a switch, and the SCP comprises service logic to provide call processing guidance, and service logic has instructions to set up the call to the subscriber station) ready for improvement to yield predictable results (see KSR – MPEP 2143). Therefore, it would have been obvious to a person of ordinary in the art to incorporate the use of the SCP as described above, and as taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claims 22-24, Taff does not specifically disclose a signal transfer point (STP), wherein the SCP is coupled with the STP via an SS7 link and the link is an SS7 over Internet protocol link. Although Taff teaches the PSTN with Centrex Switch, the Public Land Mobile Network (PLMN), and the IP network (Fig. 1, 24, 28, 30, column 2, lines 7-42). It is old and well known in the art that the present PSTN usually includes the advanced intelligent network (AIN) that uses system signaling 7 (CCS7/SS7) with the components such as the SCP, and signal transfer point (STP).

However, McConnell teaches the system (McConnell - Fig. 4) further comprising a signal transfer point (STP) (McConnell - Fig. 4, 116 STP), wherein the switch (McConnell - Fig. 4, 110 MSC) and the SCP (McConnell - Fig. 4, 124 SCP) are coupled via the STP (McConnell - Fig. 4, 126, 114), and the switch and the service node (SN)

(McConnell - Fig. 4, 120 service node or "IP") are also coupled via the STP (McConnell - Fig. 4, 114, 122, col. 11 lines 22-36), wherein the SCP is coupled with the STP via a Signaling System 7 (SS7) communication link (McConnell - Fig. 4, 126) (McConnell - Figs. 1-4, col. 2 lines 31-43), and wherein the SS7 communication link is an SS7 over Internet Protocol (IP) link (McConnell - Fig. 4, 128, col. 11 lines 45-50, i.e., SR-3511 is a TCP/IP based protocol).

Therefore, it would have been obvious to a person of ordinary in the art to incorporate the STP is coupled with the SCP via a SS7 link which is an SS7 over IP link, as taught by McConnell, into the method and system of Taff in order to enhance the method to stop the call looping in a communication network.

Regarding claim 25, Taff teaches the system, wherein the switch (Figs.1-2, 12) is coupled with the service node (Figs. 1-2, 14) via a voice services trunk connection (Figs. 1-2, 13 T1/E1/PRI trunk, column 2, lines 7-42 i.e., T1/E1 voice services trunk).

5. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taff and McConnell as applied to claims 1 and 14 above, and further in view of Naim et al. (U.S. Patent Number 7,263,354 hereinafter "Naim").

Regarding claims 3 and 16, Taff and McConnell disclose everything claimed as applied above (see claims 1 and 14). However, Taff and McConnell do not specifically disclose the ring-back tone processing logic. Although McConnell teaches to respond

with an Address Complete Message (ACM) which may be a signaling packet equivalent to a ring-back tone (McConnell - Fig. 9 (part B) col. 22 lines 27-29)

In the same field of endeavor, Naim teaches the system and method to provide a pre-paid billing system in the voice and data communication networks (Naim – Figs. 1-3a, col. 3 lines 57-67), and the pre-paid billing services (Naim - Fig. 19, 122 Pre-paid billing, 104 MSC, 108 SCP and 118 PSTN, col. 14 lines 58-60) applying the ring-back tone processing logic (Naim - Fig. 19, 666, col. 15 lines 10-16). The advantage of Naim is the hybrid MSC with the above feature can be implemented with soft switch technology (Naim – col. 15 lines 65-67, col. 16 lines 1-5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Taff and McConnell system and method with the ring-back processing logic, as taught by Naim, in order to enhance the pre-paid services.

6. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taff and McConnell as applied to claim 1 above, and further in view of Foti (U.S. Patent Number 6,963,583).

Regarding claims 9-10, Taff and McConnell disclose everything claimed as applied above (see claims 1). However, Taff and McConnell do not specifically include the well known in the art Session Initiation Protocol (SIP – the most common protocol for VoIP), and specifically about the SIP INVITE is mapped to a SS7 message in

accordance to WIN IS-771 standard. Although McConnell teaches many protocol standards (SS7, TCAP, ISUP, etc.) and equipment that the telecommunications industry has been used to communicate over their networks (McConnell – Figs. 1-4, col. 2 lines 25-52, col. 3 lines 8-22).

In the same field of endeavor, Foti teaches the detail mapping of all the different signaling protocols (Foti – Figs. 1-6, col. 1 lines 16-26, i.e., SIP, Mobile Application Part (MAP), ANSI-41 (i.e., IS-771), col. 9, i.e., Mapping Table (TABLE. 1)), and SIP INVITE message is mapping to SS7 and WIN protocol (Foti – col. 5 lines 3-5, and lines 13-19, also Fig. 6 Message Flow Diagram, col. 8 lines 27-30). The advantage of Foti is the generic call server and method for the protocol converting between all of the different signaling protocols (Foti – col. 3 lines 10-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Taff and McConnell with the mapping of the SIP to the SS7 protocols, in order to enhance the call setup.

Response to Arguments

7. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huie (US PUB. 2002/0168060 A1) teaches a system and method for detecting and preventing endless loop in the call forward feature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI N. NGUYEN whose telephone number is (571)270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. N. N./
Examiner, Art Unit 2614

/Ahmad F. Matar/
Supervisory Patent Examiner, Art Unit 2614